

Notice of Allowability

Application No.

09/996,517

Examiner

Matthew O Savage

Applicant(s)

OCHI ET AL.

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1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 10-18-04.
2. ☒ The allowed claim(s) is/are 7, 8, and 10-13 renumbered 1-6, respectively.
3. ☒ The drawings filed on 28 November 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Matthew O Savage
Primary Examiner
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An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Walter F. Fasse on 10-26-04.

7. (currently amended) A filtration apparatus comprising:

a housing head having an inlet and an outlet;

a housing bowl detachably attached to said housing head and surrounding a cartridge filter to define a channel wall; and

a releasable clamping device that exerts a force to press said housing head and said housing bowl against each other to clamp said housing head and said housing bowl together, wherein:

said housing head has a ring-shaped first sealing portion that faces said housing bowl;

said housing bowl has a ring-shaped second sealing portion that abuts directly against said first sealing portion when said clamping device exerts said force to press said housing head and said housing bowl against each other;

one of said first and second sealing portions is a protrusion and another of said first and second sealing portions is a recess;

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with respect to an axial section along a cylindrical axis line of said housing head and said housing bowl, said protrusion has a radially inner convex arcuate curved protrusion surface and a radially outer convex arcuate curved protrusion surface;

said recess is bounded by a radially inner recess wall portion and a radially outer recess wall portion;

said radially inner convex arcuate curved protrusion surface presses against said radially inner recess wall portion to form a first inner circular seal, and said radially outer convex arcuate curved protrusion surface presses against said radially outer recess wall portion to form a second outer circular seal, wherein said circular seals are formed at locations within a depth of said recess displaced away from terminal outer free edges of said recess wall portions; and

wherein said radially inner recess wall portion and said radially outer recess wall portion each have ~~[[an]]~~ a concave arcuate curved shape with respect to said axial section.

8. (currently amended) The filtration apparatus according to claim 7, wherein said radially inner and radially outer convex arcuate curved protrusion surfaces are portions of an overall ~~[[semi-circular]]~~ convex curved sectional shape of said protrusion with respect to said axial section.

10. (currently amended) The filtration apparatus according to claim 7, wherein said radially inner and radially outer recess wall portions are portions of an overall

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[[semi-circular]] concave curved sectional shape of said recess with respect to said axial section.

The paragraph between lines 30 and 31 of page 7 of the specification has been amended as follows:

As shown in the axial cross-section of Fig. 2, the protrusion 32 has an overall convex curved arcuate shape including a radially inner convex arcuate portion pressing against an inner concave arcuate curved wall portion of the recess 31 to form the inner sealing point 33, and a radially outer convex arcuate portion pressing against an outer concave arcuate curved wall portion of the recess 31 to form the outer sealing point 34. Also, it should be understood that each one of the sealing points 33 and 34 forms a continuous circular or annular seal extending continuously circumferentially around the joint between the protrusion 32 and the recess 31. As shown in FIG. 2, the sealing points are formed at locations within a depth of the recess displaced away from terminal outer free edges of the recess wall portions --.

The following is an examiner's statement of reasons for allowance: Schiavo et al taken in combination with Kosar is considered the closest prior art with respect to claim 7, however, the reference fails to teach or suggest the instantly claimed relation of with respect to an axial section along a cylindrical axis line of the housing head and the housing bowl, the protrusion having a radially inner convex arcuate curved protrusion surface and a radially outer convex arcuate curved protrusion surface, the recess being

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bounded by a radially inner recess wall portion and a radially outer recess wall portion, the radially inner convex arcuate curved protrusion surface pressing against the radially inner recess wall portion to form a first inner circular seal, and the radially outer convex arcuate curved protrusion surface pressing against said radially outer recess wall portion to form a second outer circular seal, the circular seals being formed at locations within a depth of the recess displaced away from terminal outer free edges of the recess wall portions, and the radially inner recess wall portion and the radially outer recess wall portion each have a concave arcuate curved shape with respect to the axial section as recited in claim 7.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew O Savage whose telephone number is (571) 272-1146. The examiner can normally be reached on Monday-Friday, 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Matthew O Savage
Primary Examiner
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October 21, 2004